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10 on Wireless
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SNEAK PREVIEW
of Norton AntiVirus 2004

PREMIER ISSUE

The Diskette is Dead. Long Live the USB Key!

By Keith Schwartz, Editor

For a long time now, the floppy diskette drive has seemed something of an anachronism. There was a time when it was feasible to backup the data from your hard drive onto a couple of handfuls of diskettes, but that was back in the era of 10MB floppy diskettes, 4MB processors and when the largest hard drive you encountered in the form of a laptop, in other words, a thing from ages. While you can still fit a few small files onto a diskette like 144KB ending the diskette seems to be an over-seller and wastes space in the anything useful world.

I've not the only one to think this way. Back in February Dell announced that it was going to stop adding floppy drives to its line of Dimension desktop computers. In the words of Dell product spokesman Mark Van Bogaert, "an unique technology. You wouldn't think of using a processor from 15 years ago!" But if you are like me, there are occasions when a file is simply too large to send over a network connection and yet having a CD writer like a waste of good money. So what else can you do if you find yourself in this situation?

Maybe a USB key — sometimes called a "Memory Stick" or "USB Flash Memory" — is what you need. As long as you are running a recent operating system on a machine equipped with a USB port, this might be an alternative worth looking into.

The USB device alternatives are typically very small, usually just a few centimeters in length, lighter in weight than a typical floppy disk and a USB connection is not only often provided with a protective cover to shield the connector from you and dust. If you have a Windows 2000 or XP-based PC or a Mac running anything newer than OS 8.6, you don't require any special device for it,

just plug it into an available USB port and voila! Instantly, a new drive letter will appear that you can read and write files to conveniently. Drivers are usually supplied so that you can connect in other variants of Windows.

Other than storing typical data files, they can have other uses. Synonym Flash Fanny keeps one in hand for the work, so that when he is at someone else's computer, he has all of the software on hand for his work. "I usually have my data up stored somewhere, personally some industrial about what he's working," Fanny says. But they are not only for work. "It also holds a few of my favorite songs in MP3 format" adds Fanny. It is also possible to create bootable USB keys. Further, assuming sophisticated typing to improve a particular computer's position or help store memory from a particularly hot comb.

In terms of other removable media, USB keys stand up well. They are fast — writing a file or deleting a USB key is often so the speed you can expect from a typical hard drive. They are fully read/write so that means that there are no moving parts to wear out and you can expect to read and write files to them continuously until they are replaced by something better. They draw their power from the motherboard, so there is no need for any additional batteries. Having no contact or optical surfaces, no USB key is probably all you will ever need.

There are actually alternatives. CD-RW (read and write) and FlashMemory PC cards come to mind. But the one real problem with CD-RW's where a target drive like a read a CD-RW reader by another drive. FlashMemory PC cards are a little bit too small. I find it easy to confuse or lose them.



More Memory and Features

There is one feature which seems to be in the computer world you can never have enough memory. This is also true of USB keys. I have people who have bought 32MB and 64MB USB keys, and wish that they bought bigger ones. I have a 32MB one and I find it just too small in its many uses. I've had keys enough for many great projects. But of course, wherever you budget, you'll approximate the maximum that you can afford. Which USB keys are available at the current going rates price of roughly a \$1 per MB, most people will find that too much work for the long. From current prices — which, like the way of all computer memory, is ultimately destined to fall — it makes sense to get one that falls into a memory range below that of a typical CD-RW. If you plan on using your key for heavily rotating applications or making it portable, larger sizes may better suit your purposes.

When first introduced a few years ago, the manufacturers of these devices usually offered them in small memory capacities with little in the

There is one truism which never seems to die in the computer world: you can never have enough memory

way of "more". These days though, several USB key producers are offering additional features. For example, Lexar's Jumpdrive Pro model is a combination memory card reader as well as a USB key so you

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It's 2 AM – do you know what your computer is doing?

By Greg Whitworth

How would you react if it were the events of the past month that were anything to go by, that a so-called security head questions his role – with viruses and worms such as SoBig, Nimda, and Worm Slammer making life tough for computer users throughout the province. They even managed to obstruct the travel plans of some passengers when White Star failed to bring down Air Canada routes in mid-August.

It is a clear that computer security is probably very much on your mind right now – and that you may have spent a number of frustrating hours throughout the summer dealing with problems caused by worms and viruses (and then getting the inevitable calls from relatives and friends warning them to help you with their virus-infected machines). At *Computer Pro*, we believe that it's time to make headwork from this confusion, to wrap all security features and offer a few thoughts on how you might make your system more secure.

START WITH ACCESS

Let us give you a secure, your home or apartment by checking the doors, windows and other possible places where someone might gain access: you need to start your security system by thinking about how anyone might get into your system without your knowledge – and then making sure that all such routes are secure or closed.

If you were really paranoid, you could make this a pretty easy task: you would just take out all modems (FDDI-400M, V.90-56K), floppy disks, disconnect your computer from the Internet and block all all CD ports except for the plugs for your keyboard, mouse, display and speakers. And then you would just literally look out the door where the system is stored.

Now you have a completely secure system. Unfortunately, it is almost completely useless. It achieves, however, the number of ways in which a determined hacker could enter your system – and points the way to a security strategy.

None of this should be, sorry to say, an a language professional and embedded this stuff is your daily bread and butter that you are probably no stranger to the details of installing patches, updates and security updates that it is hard to stay back and look at the whole picture. The other thing that makes it hard is that the methods by



which hackers and virus/worm writers get into your system is constantly evolving.

SET A LOCK

So what you need to do is ensure that all those methods of access have at least the equivalent of a door door "lock" on them. Secured technology can be a good solution for limiting physical access to the system. You can buy devices that will allow you to not everything from fingerprinting system as ways of properly identifying you.

In fact, the latest solution is actually produced by Bellare, Washington-based Biostar Systems and is known as BioGuard, it operates on the assumption that most people type at a unique and distinctive rhythm that has a bio-metric quality to it.

Whatever type of biometric system you opt to use, it will be more secure than a simple ID/password combination – which offers the too much room for hacking and more complicated than even in many IDs and passwords to remember that they will just use a few key combinations (such as those even more and the word "password") to key into their the password and ID somewhere near their system. Number is very smart – or very clever. It is like leaving the key on your house taped to the door.

Over and above these kinds of solutions, it wouldn't hurt to have a little physical security on your desktop or notebook computer – something which ensures that it is locked to a large, immovable object until you actually want to use it.

If you are particularly concerned about someone actually entering the hard drive of your computer and taking off with its contents, you might also want to look for a "dough bowl" encryption system.

This type of solution normally comprises two parts – the first being a small device that plugs into one of your computer's available ports such as the serial port, parallel port, USB port or PC Card slot) and the second being some encryption software that makes your entire hard disk or media a way that it can only be used if the "dough" is present. If someone tried to use the system without it, or stole the hard disk – they would find it did (but did not necessarily depending on the strength of the algorithm) to do anything with the data.

HIRE A SECURITY GUARD

Once you have achieved some sort of physical security using one of the strategies outlined above, you'll want to have protection against the attack on your system via the Internet or the network. There are many good products that offer such protection – from software firewalls such as the

Secure Solution

Symantec Norton AntiVirus 2004

By Greg Whitworth

It should be clear from the events of the past few weeks that security is a major issue in the world of a computer virus or worm. The recent Microsoft worm, and its follow-on cousin the "Worm Blar" (yes, seriously, a worm designed to corrupt the efforts of the Microsoft worm) – caused havoc for businesses throughout the Lower Mainland. In addition, they caused serious delays at Vancouver International when Air Canada's computers and banking systems were hit by Worm Blar.

All of which demonstrates the fact that on going against security and anti-virus solutions cannot be ignored by anyone serious about using technology to run a business. And, as computer professionals, failure to prepare properly for a virus or worm attack (either by not installing up-to-date anti-virus software or failing to set up automatic updates or "push" software from Microsoft) can leave us unable to serve our customers and future employees.

Needless to say, that is what many businesses will be looking at the just released Symantec Norton AntiVirus 2004. To help at that endeavor, we offer a more preview of the new solution (which will arrive in fall 2003).

The big thing about Norton AntiVirus 2004 is that it goes beyond merely helping protect you against known viruses. It expands the coverage of "known viruses" and looks for other "new virus" threats such as spyware and banking trojans. Norton AntiVirus 2004 also adds the ability to lock the virtual system component file – which, as a particularly popular way of coding, large files both within businesses and through peer-to-peer networks (chat rooms, video, image, virtual)

hair itself exhibited in Windsor KP or Marine Furrow. Finally, no internal security products (such as Furrow Insect Secured) to handle the solutions (such as Machine Washable) (250, 2500 and 20000) appeared. And last, of course, there are no real-time products — including popular offerings from Anglim, Modine and Warrington.

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and as stable as you already are using some form of non-volatile product already of our a licensed as well - but the end day an effective security is making sure that your security solutions work well together. For one thing, people adopt the notion that "if some security is good, lots of security is even better" and they overload on devices such as anti-virus, spyware, etc.

the number of people who are not in the labor force.

And all those results are inevitable directions and have a strong, zero-sum strategy plan to be followed - unless, of course, it will not be effective. It doesn't make sense, for example, to run two sets of more products on fewer systems in the hope that one product will catch what the other misses. If you don't want that way, the only real way to stop your hand from, but it will slow down the overall performance of your

1998

According to Steve Collins, senior vice president of operations and plant product delivery at *Hydrex*, the company had hoped "well beyond increased volume" production of 100,000 in 1993, but that

"The reality of the movement today in the numerous countries that are still so oppressed and abused - are emerging as alarming news" he said. "The struggle today must now increasingly concentrate on abundance of those who are paying suffering death as just of everything that earthly nations and great powers are, but these are now three, controlled by common interests, nations, world terrorism and work in the background of the system without the next hypothesis. The expanded three dimensions capabilities of North America 2004 previously said, and during all time and now more focus to keep online world information and more."

In addition, you'll find that Norton AntiVirus 2004 is more aimed at the efforts of individuals that might want to gain access to their personal information. Symantec says that the product's new detection capabilities include scans for spyware, adware, key-loggers and other unwanted "code" that can be used with malicious intent to compromise the integrity of a system, spy on the user's private data or track user activity behavior. These programs are apparently detected when Norton AntiVirus 2004 scans email, instant message attachments or files scheduled to be executed on a system — or even when these items are detected at the point of access to the system. ■



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Making the business case for wireless

By Greg Neri and Matt

As a computer professional and champion of innovative solutions, you're busy trying to make a case for introducing wireless data services at your company. For a while now, that case makes very heady "do you do you make the business case?" The company might say that it has committed to service-type nearly wireless services that long - so why would it expect the new money and dollars to implement a wireless network?

To help you out, we posed this question to a variety of independent technology companies. Wireless solutions providers and analysts, and the answers were refreshingly honest.

Unlike the hype-filled decision time in business three years ago, it seems that any statement made about wireless data services today has to be deeply grounded in reality. And the people asking these questions want to be quite clear that the company is going to make such an investment without setting a time goal to getting a quick return on the investment (or ROI, as the industry loves to call it). According to Bob Schuman, global director of mobility solutions and engineering at Silicon-Powered, the real drivers for wireless applications today have nothing to do with business value.

"This is an operational move with 3G data," he says. "It's not about ROI."



"Customers do not pay for automation - putting a wireless LAN based on network in a building so that people can make this conference room with wireless-powered laptops does not get paid for."

He says the companies that have really pioneered the use of wireless applications in the company were those that had "accidental business cases" which could be solved through the use of wireless data services. "You

need to look at examples like mobile car companies and delivery companies - which make their everything at a very high price because they couldn't solve the business problem of not being connected," added Schuman.

He also says that those companies are still the exception - and that most claim that deploy some kind of wireless data solution in their enterprise do so for very selective tasks. "Typical knowledge workers do

very system work. And companies don't use it the smart way," Schuman adds. "You have to be targeted in terms of where you provide wireless access to - such as key executives, customer facing employees and so on. The need for this kind of a solution does apply to all 100,000 people in a big corporation. It only applies to a certain segment of people who need that and make sense."

He concludes that the strongest reason for investment examples come from vertical markets - such as health care, manufacturing, government and transportation - where specific tasks can be directly enabled to great benefit.

When you start drilling down to specific wireless applications - such as mobile messaging, finding ROI becomes more of a challenge. According to David J. Longwell, a Boston analyst with R&B Business Information and author of a recently published book, called *Wireless Messaging: Deploying SMS, MMS, WAP, and others*, there really aren't any true reports ROI from wireless for enterprise wireless messaging implementations.

"There is no quantitative data on this - it's more qualitative," he says. "CIOs are looking for employees to be happy and more productive. I have created a wireless e-mail POC through some broker companies, such as

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approach that saved per day web service cost multiplied by the average hourly rate per employee to come up with a total ROI.

Some smaller companies may try to achieve ROI by implementing a wireless network in place of their wired network. But Jerry Depue, an analyst with The Yankee Group, says that the business benefits of wireless technologies does not necessarily come from the potential elimination of some elements of the wired network infrastructure.

"Mobility and flexibility are the biggest drivers," he says, explaining that many companies who look at wireless solutions do so because they have an outdoor workplace that needs to be connected within a corporate campus perimeter or when making sales calls to clients. They generally do not implement wireless solutions to save money on wiring.

He also admits that cost has slowed the adoption of the technology in the past, although it is becoming less of a concern as prices drop and businesses recognize the benefits of offering wireless access to their workforces. "Cost and security seem to be the biggest inhibitors," observes Depue. "Security has to be part of the product (and when it is) we will see it disappear as a barrier."

In some cases, small business wireless networks as standalone devices or as an add-on to the network—so that anyone who comes within wireless access range of your network can have network access to it.

According to Yegorov Gupta, chief technology officer of software giant Computer Associates, wireless solutions have to be implemented with considerably care. If someone in a small company decides that they want to have wireless access to the company network and creates a wireless LAN access point to create that access, they may be creating security problems for their company.

"This means that anyone within access point can be connected without

the network administrators even realizing it has happened," he cautions. "You need to allow people to configure those access points and then manage availability and performance of them. You also need to protect sensitive data from wireless management systems."

As one of the companies applying such wireless services, British technology firm Transconex is very much open to the kinds of access they face in helping customers connect their offices and mobile devices to applications that will make the most of a wireless infrastructure.

Transconex's customers include the majority of the UK's main newspaper parent companies including LBS, RTL, ITN, Press, Associated Press, Reuters, director of core business for Transconex, wireless solutions providers are under-going the same kind of "nearly shock" that forced providers of Internet-based solutions about 18 months ago.

"The small message 'log back with main of the desktop before it is of a wireless made up mostly of connections. This is, obviously, close to the way the Internet was originally perceived as primarily a connection made only later on was the importance of the Internet as a tool to supply data management, customer relation management, and other corporate applications related," he says. "In the future, any mobile data is important as just as a way of working individuals to communicate but making enterprises to handle data between their local systems and field personnel as devices. Enterprises want their core requirements such as email and CRM, with movement. However, while most managers want one step with less network, creating many enterprise applications are only access control. If a customer still is wrong because of corrupt data from a currently managed per meter, the consequences are better than before than on my download going wrong or a printed SMS to a friend." ■

Ten tips for going wireless with an 802.11 network in your home

By Computer Pro staff

If you've been holding back on setting up a wireless network in your home or small business, wait no longer. While it's not every two years ago when they first became available, 802.11b-based WiFi wireless networks have quickly evolved to become a great way to quickly and cost-effectively create a network to meet almost instant access.

Even so, they can be still be a little challenging to set up properly. So we offer the following ten tips for doing a home job of setting up WiFi. All these tips assume that you have broadband Internet access (not cable or DSL). There really isn't a lot of point in setting up a wireless network if you don't.

Use Windows XP as the operating system for the devices on your wireless network, if you can – Microsoft Windows XP offers the best operating system-level support for configuration of 802.11b-based wireless networks. It is far superior to Windows 2000 in this regard – and much better than most of the wireless client management tools which come with wireless host stations and access cards.

If you are planning to use other operating systems on the network, look to Windows XPSP, Windows ME, or Windows 2000; there we would strongly suggest you use a standard wireless management client on all of them. We would recommend Broadcom-based Carnot's WNA – which is available in various flavours for Windows as well as Pocket PC and downloadable from the Carnot Web site at <http://www.carnot.com>.

Use a wireless access point that supports a built-in hub – Most access points do these days, but just make sure that your access point is one of them. For a small network, it's more efficient to have a hub/access point combination than having the two



devices separate. The only downside is if you want to connect more than four computers on the wired side of the network – in most home wireless access points are four-port models (although you can obviously buy models which can support more).

Think carefully about which devices should live on the wired side of the network and which will be wirelessly-connected – If you want, you can have all the devices connecting wirelessly to the network from desktops or can connect through PCI adapters or USB adapters – although you will probably want at least one to have a wired connection to the access point so that it can be managed properly.

Think about which you want your access point before setting it up – If you have a base-level home, for example, you may want the access

point on the middle floor. Before you set it up, however, remember you plug it in and switch it on (without setting up security) and then walk around the house with an 802.11b-enabled notebook or handheld and make sure you are getting the signal strength you need.

Don't sleep on security just because the network is wireless – Unless you are trying to offer "Zero-Brazil" wireless access to your network, use the built-in WPA protocol by making sure that it is enabled (a, enable MAC addressing (is this only systems with specific network card addresses can access the network), change the default SSID strings and disable SSID broadcast. Also change the default IP and password for your access point. The bottom could well make your network a little more cumbersome to manage, but they will

make it more secure.

Before buying an 802.11b-enabled your handheld, make sure you have the drivers for it – Not all 802.11b cards will work with all handhelds. They will need an appropriate device driver. Many manufacturers, for example, have not yet gotten around to writing device drivers for Pocket PC-based handhelds. Sometimes you can get a new standard card with another card's driver (so that an HP/Compaq 6700 S30 can be connected into working with a Microsoft 680-530 wireless card by using driver binaries for the Compaq PL100 wireless card).

Don't yourself turn to makeshifts for security – There are always more than a couple of things that can go wrong when installing a wireless network, so don't assume that you'll have it up and running on the instant.

Make sure that all connected devices have appropriate factory installed – If your notebook or handheld computer was previously a workstation device that didn't live on the job, work on with "discovery" (factory access) make sure that it has all the basic security protection in the device on the wired side of the network. If not, it will become the "wireless link" in your wireless network.

If you are planning to get a new notebook, look at a Carnot-based solution – Carnot is spending a lot of time and money to make sure that access points and wireless management applications work with the Carnot wireless-caching mobile computing technology. This could save yourself some computing and wiring headaches by choosing a Carnot-based system if you are in the market for a new notebook anyway.

Happy wireless computing! ☺

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The ABCs of network management

ROI and TCO using WS2003 and 802.11b

By Computer Staff

You know that cost is not just about the money your company spends on facilities, software and assembly services (such as Internet access and telecommuting fees for sales reps applied).

You really need to look at the overall cost of managing these costs and the networks on which they operate to achieve a realistic understanding of "total cost of ownership" (or TCO). TCO is a measure that has become just as important as the other three-line financial statements used in technology buying: revenues (ROI) or return on investment.

In the first of a three-part series looking at TCO and ROI – and the role that new technologies such as Microsoft Windows Server 2003 and Intel's Centrino display in optimizing them – we look at the total business costs at play at the client, in part due to IT "leak" down from the features that these technologies are being to have in reducing greater TCO and ROI. And in the concluding article of the series we'll look at how such stacks up against its competitors (including new Sun Solaris and Linux-based server solutions as well as more generic server network implementations).

Windows Server 2003 leads in the stack for the TCO.

Microsoft's recently launched Windows Server 2003 solution for managing large networks is a perfect example of a product that addresses power demand for the ROI. The whole theme of the launch was about "doing more with less." And a great deal of the work of the study of customers to carry on "server consolidation" where the business of using servers was only for three reasons.

In real world terms, the evolution of this approach to IT asset management and cost reduction was demonstrated by the adoption of Windows Server 2003 at VMware's own Internet Corporation. You probably know that Internet was a huge client of Windows/Windows core of course, as VMware later said. It is also a developer and operator of virtual network servers with 11 servers in North America and additional virtual development in its recent locations in North America and Europe.

According to Internet chief information officer William Davis, the growth of Internet has prompted the company to look for better ways to manage its network, and virtual resources – and it has been using Windows Server 2003 very effectively to do so. "We will end up with about

one-third of the number of servers survived in our core directory and security as we had with Windows NT," he said. "When it's said and done, we will have reduced the number of non-compliance servers from 150 to 50."

Davis said that the business benefits of reducing the number of servers is twofold. To start with, since servers can be repurposed for other applications within Internet's various additional business units, he added the cost of maintaining and securing the company's core server network is also reduced when there are fewer servers that have to be maintained.

Microsoft has been working to provide ways of making support units in a range of ways – the facts as reduced through server products as well as its desktop applications. When a virtualized Microsoft Windows XP for example, the company included "remote control" capabilities in that case could allow such support personnel to remotely see and take control of their Windows XP-based systems allowing them to troubleshoot whenever access they wish doing.

The challenge is a diverse technological environment, however, is that a variety of different platforms and devices need to be supported – you probably can guess such as security must be uniformly implemented and managed across all of them. And that can be a challenge in a less conventional environment such as a wireless network.

The Centrino solution, a path to wireless productivity?

Moving that challenge is one reason the Intel Corporation recently announced the development of a technology is called Centrino, which covers a specially-designed Intel mobile support processor with a "chip set" that also provides wireless data connectivity using the 802.11b system standard.

Doug Cooper, general manager for Intel in Canada, says that the real value for business users – and particularly for small business operators – lies in gaining some tangible business value from wireless. In reducing the technology costs for the common business climate, more businesses could be highly compelling cost for spending any significant amount of money on computer hardware without an infrastructure.

But Cooper says a business using data for doing so – doing wireless which suggests that wireless computers is a percent of systems installed, under top class 25 per cent of



the personal computer population in most large firms. He also says that about 60 per cent of workloads is mobile.

This means that half the mobile workloads does not have follow-up access to a notebook – and the first's own research suggests that the server from desktops in networks has allowed employees to do four to eight times per week of additional work. If you then add wireless capabilities to the notebook, the same research suggests that you get 11 servers from work a week, or a weekly hour from three employees.

"There are lots of professional services who could make use of Centrino – including legal firms, consultants, accountants from any company that may need faster information and so on," said Cooper.

Meanwhile, according to Frank Gillett, principal analyst at the infrastructure team at Forrester Research, the area is not just about technology – it's about how to bring the right assets and approach to IT spending: one that allows companies to consider wireless asset management. He says that up to 50 per cent of the wireless data network is large organizations spend usually on their IT infrastructure – servers, networks, software and storage – is wasted as a result of poor planning and a lack of proper IT asset management.

Mark Chikara also says for the exception rather than the rule and that's about wireless assets that

applications," he says. He also suggests that 15 per cent of IT budgets are spent on personal costs – and most of this is on travel, corporate system management tools that should be minimized.

Forrester Research has come up with an approach to calls "Organic IT" to address this issue. Forrester suggests that companies use immediately reduce Organic IT broadly by making simple changes to IT policy over examples are:

- Stop buying IT purchasing decisions on projected peak usage times – plan for the risk and the throughput.
- Reduce the number of servers needed in a large data center by using rapid server growth using to share processing power between applications.
- Minimize the under utilization of storage applications with "storage virtualization" to enable some applications sharing of storage resources.
- Adopt web servers to reduce even greater cost savings.

DON'T MISS PAGE TWO NEXT MONTH

In part two, we'll really "dig down" into the features that Windows Server 2003 and Intel Centrino can bring to have a reducing greater TCO and ROI. ■

Making the Right Back to School PC Choices

By Greg Kirschlempke

What do you want your kids to use a computer for? It may seem like a trivial question, but it will have a lot to do with the kind of system you put together to help them with their school work.

The assumption is that you want them to be able to use a lot of everything — from research to writing to gaming to retail and contact managing with OnLine. But, as you are an adult, away from years of working with computers yourself, a really smart first step might be to get some serious technological specifications from the store likely to be on your mind — there are also parenting issues at play here.

If you are the type of parent who completely trusts their kids — and everyone with whom they might come into contact while using their computers — then you might simply order up the latest and greatest home system and install it for them (something like a Dell Dimension 4400 with a 7.4 GHz Pentium 4 processor, an 80 GB hard drive, 2GB of memory, DVD drive, CD-RW drive and 17-inch display which was on sale at J&J for \$1,099 — plus shipping and taxes).

But if you are like most parents — and you are a little leery of the trouble your kids might get into (or be led into) — then you might want order their second software book in the Microsoft series (which is the Norton SystemWorks) and a lot of guidelines for your kids on what they can and can't do on the computer.

Just if you would in an office, you'll also have to grapple with identity privacy questions (such as whether to set email and instant messaging connections are going to require parents to let their kids control the rights to look at your child's instant message conversation log or allow wherever you deem it necessary).

Be guided by your own parenting objectives

And a nice twist is that your approach to parenting will also determine how you buy and configure the system. You may tell your child that you will pay for it, but, basic office system (such as the 1499 Compaq 140899C, desktop powered by an Intel Celeron 3.06GHz processor, 1GB RAM, memory 40GB Hard Drive, 41X CD-RW and 16X DVD burner) even at sale it is a hard sell that will allow them to use

CD-ROM based electronic encyclopedias and use the Web for research — as well as handle all the word processing and graphics composition needed for most essays and reports — but that your child will have to pay for things such as high-performance graphics cards, printers, games software, storage, schools and other grades out of their own money.

Another element that you should consider is the child's age. If you are getting a computer for a young child in a learning tool, you may want to think for a moment about whether or not it will actually be used in the manner your parents by elementary school students now suggest that younger children are usually by "Monsters" then learning by the technology itself — even if it is delivering software aimed at teaching them the alphabet, as well as reading, writing and arithmetic.

The worry is that children connect with the bright colors and flashy animation of the software designed for example to help them to read — rather than discovering the joy of reading by picking up an age appropriate book. Over time it could

even result in the child feeling reading a traditional book, regardless of how paper to be too boring — thereby limiting their ability to read with enthusiasm and rigor.

Buy versus upgrade?

Once you have grappled with all those thorny questions — and you're decided on the kind of system that is most likely to be for your student — the next question you may wish to ask is whether or not you want to build, or build on top of the system. After a lot of research, I discovered that you buy one.

I had already thought it might make sense to mix in older office system and upgrade that for one of my kids — instead of buying something new I took an older 800 MHz Dell Dimension with a small hard disk, added memory to it from a couple of other systems (bought an 80 GB hard drive and an internal, 1GB hard CD-RW) so that it could be shared between a couple of other systems that didn't have any kind of built-in backup — I also upgraded the OS to Windows XP Professional.

By the time you add up the cost of

you haven't really pushed the limits of tech support until you are going mano-a-mano with a 10-year-old boy who really wants to get his school project finished

all these upgrades, it seems to make more sense to build up what the OS upgrade is allowed to do. This brings it to the same point as that new, shiny level Compaq system with a minimum 2.4 GHz processor, loaded up with Windows XP Home Edition and a 40 GB hard drive with 1GB RAM of memory.

The other option, of course, is to go out and get a used system. I recognized that this option is well and feared that as my two-year-old HP Pavilion system, with 1700-MHz PII 500 of RAM, 40 GB hard drive and a 500-MHz GeForce 256 card, had the HP in its own local used computer shop. It was only offered with Windows 98. However, not upgrading to Windows XP would have brought the price to the same as a new entry-level system.

So I guess the operating system you choose will have a lot to do with whether or not you choose to upgrade, but need to go for a new system. This could, of course, really break free from the rules of Microsoft and get a completely different operating system (such as the Linux-based Redhat) or even the latest Mac OS running on a new or semi-new (Mac) but be warned that your kids may rebel against it if their favorite software won't run on your chosen alternative operating system.

In instances of any one of the case who is going to have to provide "back support" for the hardware, you will probably want to make things as easy as possible for yourself by considering on a single operating system and hardware platform. In our house (for example) I playtech support in these children (one 14-year-old and two 10-year-olds) running two Windows XP systems and one Windows 98 system.

Interestingly enough, I spend more time trying to solve problems that occur on the new Windows XP system than on the Windows 98 system. Naturally, this is partially because the Windows 98 system is more limited in the number and kinds of applications it can run — but can be much. I use Office 2000 Internet Explorer 6.0 and most of my kids' favorite games (except for the latest edition of The Sims and a variety of graphics-intensive simulations such as Roller Coaster Tycoon).

Anyway, the point is that you haven't really pushed the limits of tech support until you are going mano-a-mano with a 10-year-old boy who really wants to get his school project finished and is about to be faced with the prospect of copying the whole thing? This, good news, however, is that this particular category of user

appears to be a quick study and is capable of absorbing a lightning amount of knowledge quickly to be able to provide their own support to the next user they encounter a similar problem.

Behind the Computer

And it's not just about the kind of PC you buy for your kids. There are also a few additional pieces of technology that can really make a difference in helping your kids with their school work.

In our house, we've introduced the help with homework in the summer. It's a great way to get a reference manual for the library books — and, when used as a computer with a printer, it can double as a photocopier.

When doing projects, the manual also provides a way of gathering information that can be stored and printed out for placement on a poster board. Perhaps best of all, the manual gives very valuable when one of my children's friends "phones" and says they have forgotten their homework. We just open up the homework information and email it to them (and they return the favor when one of my kids forgets their homework).

A good manual can be had these days for less than \$300. Look for Drago for example, with a number of Canon and HP models for between \$300 and \$450 — and most of them would be more than adequate for the kinds of tasks that face the average student.

The other really useful piece of technology for "Back to School" is the digital camera. With a good digital camera, it is possible to cover all kinds of assignments, to collect projects and take reports. I recently used a combination of Canon's \$215 PowerShot A70 and the \$489 Canon 770 photo printer.

These worked particularly well together as the printer allowed the direct connection of the camera so that high-resolution photos could be printed without needing any use of the computer. And it can be conference and note-taking to spread the images to the computer and then print them out directly as you wanted them. Windows XP does of course, go a long way towards helping with the task using an excellent printing wizard. It

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Network Associates Launches New McAfee SpamKiller Appliances

Network Associates, Inc. has created a family of new devices aimed at combating junk mail (spam). They are known as the McAfee SpamKiller appliances and are aimed at enterprise email systems.

Designed to save space at the Internet gateway, Network Associates says the three McAfee SpamKiller appliances provide "robustly feature-rich spam protection and system management functionality in an integrated hardware and software solution."

The company is pointing to this solution as a way for corporations to address the need for corporate businesses to reduce their potential legal liability caused by their network bandwidth and allow employees to work more efficiently.

McAfee SpamKiller appliances work by scanning each incoming email as it reaches the Internet gateway using a prebuilt set of thousands of rules to proactively detect and quarantine spam. The company says that this means that network resources are not wasted. It further suggests that by alleviating the burden of unwanted messages, McAfee SpamKiller appliances also increase worker productivity as employees no longer have to waste their time dealing

with a viral email and what is again finally. Network Associates is appealing to growing corporate fear of litigation from employees' suits as required by inappropriate spam in the course of their work. It is also that one of the product significantly reduces the threat of inappropriate content reaching employee inboxes - and this helps protect organizations' business processes, financial and legal liability.

In looking the announcement, Network Associates also offered customer testimonials on the utility of the solution. "Spam is a serious impediment to business productivity and a liability because the very organization. At Aaron Health Care, we have taken various measures to eradicate this growing menace by attacking the problem head on with McAfee SpamKiller appliances," said Dan Lukin, lead security architect of Aaron Health Care. "At the gateway, SpamKiller considerably reduced the amount of spam entering our network and helped to alleviate the strain on network bandwidth."

Network Associates says the McAfee SpamKiller technology uses a "lightly accurate scoring system" to determine whether a particular email is spam. With these rules forming behind McAfee SpamKiller, each

email receives a positive or negative score to determine its overall spam rating. Emails with high-level spam, a detailed message can be delivered to different administrative staff locations.

Network Associates says it has developed the McAfee SpamKiller product family to detect spam with a success rate of up to 99% with false-positive rates of "top product" rate of less than 0.05%. It further claims that by using five different methods of detection, McAfee SpamKiller appliances give IT administrators a proactive and comprehensive solution to fighting spam.

Integrity Analysis — Examines the header, body and organization of every incoming email message and applies thousands of algorithms to determine if the email is spam.

Statistical Detection — With a set of recognized rules based on known spam characteristics, McAfee SpamKiller works proactively to secure the network against spam.

Content Filtering — The administrator-defined set of words and phrases helps further identify unwanted email and inappropriate content.

Black and White Lists — A set of standards defined by the administrator and email blocking white and black lists to determine fully acceptable sources of email as well as unwanted and inappropriate

sources of email.

Real Time Protection — Real Time Protection Suite provides fast, low-latency results. When implemented with McAfee SpamKiller on RBL, it will ensure that if email is received from one of the domains on the list, that it will be blocked or quarantined.

Corporations are quickly adapting to enterprise spam policy as the problem for enterprise networks increases. McAfee SpamKiller appliances address this critical need and provide a solution that can scale consistently to meet enterprise needs," said Ryan Muller, director of product marketing for Network Associates.

Network Associates offers several McAfee SpamKiller appliances. It says the SpamKiller 4700 is designed for smaller businesses and will scan 25,000 SMTP messages per hour. The SpamKiller 4700 for business to large mail businesses will scan 40,000 SMTP messages per hour and the SpamKiller 4700 for enterprise mail systems, including businesses with high-performance requirements or businesses using complex public-network infrastructures, will scan 10,000 SMTP messages per hour. Within four days, technology behind the appliances may allow the use of multiple appliances if greater performance is needed. Pricing was not available at press time. ■

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Handheld business card scanner Makes Customer data collection easy

So you want to be able to scan business cards into your website computer while you're on a business trip, but you don't want to carry a bulky scanner or play a lot of money for one? Well, you may be interested in PocketScan's latest Handheld Office product, which is a handheld, USB-based business card scanner that sells for less than \$250. Available as from the Rochester-based Acacia Group (the 800-278-6377 or on the Web at <http://www.acaciagroup.com>), the scanner is small enough to fit in the palm of your hand and has software that will handle optical character recognition of English or Chinese characters. It supports the ability to allow multiple users to build their own card databases, provides support to Microsoft Outlook, manages info and connections in PDA and mobile phones, and doesn't require any business (or a share) from your computer's USB port. ■

Putting a human face on Web phone message services

If you run a small business, you probably have had to sit in a call center, personal touch to customers. The simple act of answering your phone for example is typically handled by a voice message service, and often one that implies you're going through an

answering machine of some kind to receive your messages.

Enter CallTime Services Corporation, which appears to have found a niche in providing personal, live call answering and personal message services. The company says that these services allow small-to-medium size enterprises that subscribe to CallTime to enjoy "all the benefits of professional, attentive, friendly, while checking overhead costs associated with maintaining and retaining full-time telephone reception staff."

The company says that its 24-hour, 7-day-a-week service promises to ensure every single one of its clients, incoming calls by a live operator in a prompt, efficient and courteous manner. Subscribers can apparently specify call handling preferences by calling their assigned "voicemail assistant" on the phone - or by using a Web-based message center. Calls are taken from CallTime offices, but "leave-the impression that they are answering calls right from the client's front desk. You can find out more at <http://www.calltime.com>. ■

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Case Study: Fine Arts Engraving

Challenge

Fine Arts Engraving wanted to publish and host an application to 18-800 IBM Global Service employees around the world. After the acquisition of Press Water House Cooper's consulting division, IBM had an immediate need to manage business cards and statements for its large number of employees who had just joined the corporation. Fine Arts Engraving was the company responsible for this multi-year project. Since all Fine Arts Engraving end-users needed their own customized business cards, in order to manage this project, Fine Arts Engraving was looking for a developer service that could help them to design and build a custom web-based application, which will automate and simplify the order process.

Solution

As a result, Fine Arts Engraving chose to Neo|Code for assistance. Within 14 days, the application was developed, published, and hosted. Six talented and experienced programmers wrote the program in just 7 days, and it was hosted for a week. In order to meet our client's deadline, our programmers dedicated themselves to work around the clock to have the job done at the best possible way.

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